

L 10658-63

ACCESSION NR: AP3001211

2

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova,  
Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of  
Sciences, SSSR) Laboratoriya khimii gidrakov i bora (Laboratory of Hydrides and  
Boron Chemistry)

SUBMITTED: 06Jul62

DATE ACQD: 01Jul63

ENCL: 00

SUB CODE: 00

NO REF Sov: 006

OTHER: 007

Kes/B  
Card 2/2

L-13501-63

EMP(q)/EMT(m)/EDS APTTC/ASD JD/JG

8/0078/63/008/007/1710/1714

ACCESSION NR: AP3003482

AUTHOR: Mikheyeva, V. I.; Sterlyadskina, E. K.; Chertov, A. A.

TITLE: Hydrogenation of aluminum-cerium alloy

SOURCE: Zhurnal neorganicheskoy khimii, v. 8, no. 7, 1963, 1710-1714

TOPIC TAGS: aluminum, cerium alloy, hydrogen, hydrogenation

ABSTRACT: Authors studied hydrogen absorption by cerium during its alloying with aluminum. Reason for this study was the marked absorption of hydrogen by cerium-magnesium alloy, characterized for a number of cases by whole and multiple proportions of CeH sub 3 to MgH sub 2. Metallic cerium, 99.9% pure aluminum and hydrogen which was obtained by the pyrolysis of titanium hydride, were used as materials in the study. The alloys were hydrogenated in accordance with the previously-described methodology (Mikheyeva and Kast, Zh. neorgan. khimi, 3, 1958, 260; Mikheyeva et al, Zh. neorg. khimi, 8, 1963, 1320) at room temperature and hydrogen pressure of about 1 atm. The hydrogen content in the hydrogenation products was determined by measuring the hydrogen volume during their reaction with diluted muriatic acid (1 : 5). The hydrogen volume which could be evolved during a reaction with metallic oxides, entering into the composition of the hydrogenation

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57

L 13501-63

ACCESSION NR: AP3003482

products, was calculated from the overall volume of evolved hydrogen. Authors found that alloying cerium with aluminum increases the induction period and hydrogenation time. The involvement of aluminum in the hydrogenation process was shown by observations over the hydrogenation process and analysis of the properties of the hydrogenation products. The maximum hydrogen absorption by aluminum corresponds to the empirical formula CeH<sub>3</sub> times 0.163AlH for an alloy with 14 atm. % of Al. Basically, the hydrogenation products of cerium-aluminum alloys evolve hydrogen in two stages, which, however, is not expressed as clearly as for CeH<sub>3</sub>. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, SSSR). Laboratoriya khimii gidridov i bora (Laboratory of hydride and boron chemistry).

SUBMITTED: 16Aug62 DATE ACQ: 02Aug63 ENCL: 00

SUB CODE: CH, ML NO REF Sov: 004 OTHER: 008

Card 2/2

L 13500-63

EWP(q)/EWT(d)/EWT(m)/BDS AFFTC/ASD JD/JG

ACCESSION NR: AP3003463

8/0078/63/008/007/1715/1721

AUTHOR: Mikheyeva, V. I.; Sterlyadkina, E. K.; Chertkov, A. A.

60

TITLE: Hydrogenation of alloys of cerium with magnesium and aluminum<sup>27</sup>

59

SOURCE: Zhurnal neorganicheskoy khimii, v. 8, no. 7, 1963, 1715-1721

TOPIC TAGS: cerium, magnesium, aluminum, hydrogenation, alloy

ABSTRACT: Authors studied the effect of aluminum on hydrogen absorption by cerium-magnesium alloys. The hydrogenation zone of Ce-Mg-Al ternary alloys was determined at ordinary temperature and hydrogen pressure somewhat lower than atmospheric. The starting materials were metallic cerium, electrolytic magnesium and metallic aluminum of 99.9% purity. Dry hydrogen was obtained by decomposing titanium hydride which did not require any additional purification. The hydrogenation of the alloys was carried out on apparatus which did not basically differ from that described by Mikheyeva and Kost (Zh. neorgan. khimii, 3, 1958, 260). The hydrogenation zone of alloys in the system Ce-Mg-Al, rich in cerium, was determined at room temperature and normal pressure. It is distributed up to 25 atomic % of aluminum and 70 atomic % of magnesium. The maximum hydrogen absorption in the zone with 5-10% aluminum and 35-60% magnesium. It was shown that alloying melts in the

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L 13500-63

ACCESSION NR: AP3003483

Ce-Mg system with aluminum increases hydrogen absorption. During maximum hydrogenation of cerium to the composition CeH sub 3 and magnesium to the composition MgH sub 2, a part of the hydrogen is absorbed on account of being involved in the aluminum hydrogenation process. The presence of aluminum (5-15%) in alloys with a total content of aluminum and magnesium above 50% sharply reduces the hydrogenation induction period and produces a reaction which is less dependent upon the purity of the hydrogen. Aluminum also effects a lowering in the temperature for decomposing the cerium dihydride from 1080° (for pure dihydride) to 1010°. Orig. art. has: 5 figures and 1 table.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova  
(Institute of General and Inorganic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 14Aug62 DATE ACQ: 02Aug63 ENCL: 00

SUB CODE: CH, ML NO REF Sov: 008 OTHER: 007

Card 2/2

MIKHEYEVA, V.I., doktor khim. nauk

New methods of inorganic synthesis. Vest. AN SSSR 33 no.5:  
34-39 My '63.

(MIRA 16:6)

(Chemistry, Inorganic—Synthesis)

VOYTSEKHOVSKIY, V.L.; MIKHAYEVA, Ye.Ya.

Standardisation of methods for the analysis of materials used  
in the countries of people's democracies. Nauch.-issl. trudy  
TSNIKP no.33: 71-96 '63 (MIRA 18:1)

MIKHEYeva, V.I.; STERLYADkINA, Z.K.; KONSTANTINOVA, A.I.;  
KRYUKOVA, O.N.

Absorption of hydrogen by alloys of cerium with magnesium.  
Zhur. neorg. khim. 8 no.6:1314-1319 Je '63. (MIRA 16:6)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.  
Kurnakova AN SSSR, laboratoriya khimii gidridov i bora.  
(Cerium-magnesium alloys)  
(Hydrogenation)

S/020/63/149/003/022/028  
B192/B102

AUTHORS: Mikheyeva, V. I., Titov, L. V.

TITLE: On the solubility of sodium boronhydride in pyridine

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 3, 1963, 609-610

TEXT: The solubility of  $\text{NaBH}_4$  in pyridine was investigated between  $-44.5^\circ\text{C}$  and  $+75^\circ\text{C}$ . The melting temperature of pyridine decreases considerably if  $\text{NaBH}_4$  is added and the crystallization line of pure pyridine terminates on the eutectic point at  $-44.5^\circ\text{C}$  with a concentration of about 1.0 weight percent  $\text{NaBH}_4$ . The eutectic is followed by the crystallization line of  $\text{NaBH}_4 \cdot 3\text{Py}$  which ends at  $-4.7^\circ\text{C}$  and 6.8 weight percent  $\text{NaBH}_4$  and corresponds to the reaction equilibrium  $\text{NaBH}_4 \cdot 2.5\text{Py} \rightleftharpoons \text{NaBH}_4 + \text{solution}$ . Ultimately the crystallization line of the solvate  $\text{NaBH}_4 \cdot 2.5\text{Py}$  ends at the point  $+5^\circ\text{C}$  and 8.1 weight percent  $\text{NaBH}_4$  and corresponds to the peritectic equilibrium  $\text{NaBH}_4 \cdot 2.5\text{Py} \rightleftharpoons \text{NaBH}_4 + \text{solution}$ . Above this point the  $\text{NaBH}_4$  not

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On the solubility of sodium ...

S/020/63/149/003/022/028  
B192/B102

solvated crystallizes out of the saturated solution. The solubility of  $\text{NaBH}_4$  in pyridine increases from 1.0 weight percent at  $-44.5^\circ\text{C}$  to its maximum value of 8.1 weight percent at  $+5^\circ\text{C}$  with increasing temperature; above this temperature it rapidly drops to 2.5 weight percent at  $+75^\circ\text{C}$ . The same dependence of the solubility on the temperature has been observed with the system Diglim - sodium boronhydride and a series of water-salt systems. It is assumed that the solvation of the molecules of the solvent within a narrow range of temperature and the decomposition of solvates when the temperature is increased are responsible for this behavior. There is 1 figure.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakov Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences USSR)

PRESENTED: November 21, 1962, by I. I. Chernyayev, Academician

SUBMITTED: November 13, 1962

Card 2/2

TABER, A.M.; POLKOVNIKOV, B.D.; MAL'TSEVA, N.N.; MIKHEYEVA, V.I.;  
BALANDIN, A.A., akademik

Study of catalysts produced by the reaction of sodium borohydride  
with salts of heavy metals. Dokl. AN SSSR 152 no.1:119-121 S  
(MIRA 16:9)  
'63.

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.  
(Catalysts) (Sodium borohydride) (Salts)

SHCHIROVA, N.A.; ZINOV'YEV, A.A.; MIKHEYEVA, V.I.

Melting diagram of the system  $\text{Cl}_2\text{O}_7\text{-SO}_3\text{-H}_2\text{O}$  in the region  
of high concentrations of perchloric and sulfuric acids.  
Dokl. AN SSSR. 152 no.2:346-348 S '63. (MIRA 16:11)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova.  
AN SSSR. Predstavлено akademikom I.I. Chernyayevym.

ACCESSION NR: AP4009347

S/0078/64/009/001/0056/0059

AUTHORS: Fedneva, Ye. M.; Alpatova, V. I.; Mikheyeva, V. I.

TITLE: Reaction of diborane with isopropylamine and ethylenediamine.

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 1, 1964, 56-59

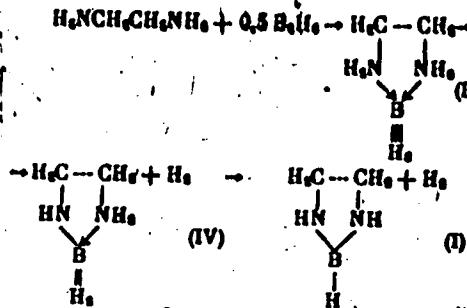
TOPIC TAGS: diborane isopropylamine reaction, diborane ethylenediamine reaction, trimethylboron ethylenediamine reaction, stability

ABSTRACT: Diborane reacts at 0° with isopropylamine to form iso-C<sub>3</sub>H<sub>7</sub>NH<sub>2</sub>·BH<sub>3</sub>, which on standing at 20° decomposes:

Diborane reacts with ethylenediamine to form a product C<sub>6</sub>H<sub>6</sub>N<sub>2</sub>BH and H<sub>2</sub>. This colorless liquid showing reducing properties is formed if the reaction is run at 20°, 0° or -30°. The following reaction is proposed:

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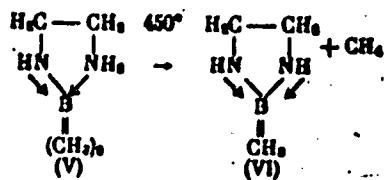
ACCESSION NR: AP4009347



Product is so unstable that it is impossible to obtain molecular weight, reaction constants or even its spectrum. The conversion in the previous equation is believed the same as for the compound of ethylenediamine with trimethylboron:  $\text{H}_2\text{N}(\text{CH}_2)_2\text{NH.B}(\text{CH}_3)_3$ ,  $\text{H}_2$  being

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ACCESSION NR: AP4009347

split out instead of  $\text{CH}_4$ :

Orig. art. has: 3 Equations and 1 Table.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S.  
Kurnakova Akademiya nauk SSSR (Institute of General  
and Inorganic Chemistry Academy of Sciences SSSR)

SUBMITTED: 08Jan63

DATE ACQ: 07Feb64

ENCL: 00

SUB CODE: CH

MR REF Sov: 002

OTHER: 017

Card 3/3

ACCESSION NR: AP4019493

S/0078/64/009/003/0682/0687

AUTHORS: Mikheyeva, V. I.; Titov, L. V.

TITLE: The pyridine--sodium borohydride system

SOURCE: Zhurnal neorg. khimii, v. 9, no. 3, 1964, 682-687

TOPIC TAGS: pyridine sodium borohydride system, pyridine isopropanol sodium borohydride, sodium borohydride, solubility, borohydride production, solubility diagram,  $\text{NaBH}_4 \cdot 3\text{Py}$  complex,  $\text{NaBH}_4 \cdot 2.5\text{Py}$  complex

ABSTRACT: The solubility of  $\text{NaBH}_4$  in anhydrous pyridine was investigated to determine the suitability of pyridine as the solvent in the synthesis of other borohydrides by exchange reaction between  $\text{NaBH}_4$  and inorganic salts. The composition of the crystallized solid phases was also determined. From the solubility diagram (fig. 1) it is seen that the  $\text{NaBH}_4$ -pyridine (Py) system is characterized by the formation of 2 solvates formed by peritectic reactions:  $\text{NaBH}_4 \cdot 3\text{Py}$  at -4.7°C and 7%  $\text{NaBH}_4$ ; and  $\text{NaBH}_4 \cdot 2.5\text{Py}$  at 5°C and 8%  $\text{NaBH}_4$ . The maximum solubility

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ACCESSION NR: AP4019493

of  $\text{NaBH}_4$  in pyridine is 8% at 5°C; it decreases with increase or decrease in temperature. In the diagram, AB represents Py crystallization; BC is the crystallosolvate  $\text{NaBH}_4 \cdot 3\text{Py}$ ; and CD, the second solvate  $\text{NaBH}_4 \cdot 2.5\text{Py}$ . At point D the second solvate decomposes; after that the solubility of  $\text{NaBH}_4$  starts to fall rapidly with increasing temperature. The equilibrium at point C may be represented by the reaction  $\text{NaBH}_4 \cdot 3\text{Py} \rightleftharpoons \text{NaBH}_4 \cdot 2.5\text{Py} + \text{solution}$ , and at D by:  $\text{NaBH}_4 \cdot 2.5\text{Py} \rightleftharpoons \text{NaBH}_4 + \text{solution}$ . The solubility of  $\text{NaBH}_4$  in pyridine-isopropanol solvent systems was investigated (fig. 2). At 18°C the solubility of  $\text{NaBH}_4$  is reduced gradually from 7.2% in pure pyridine to 0.4% in pure isopropanol. The  $\text{NaBH}_4$  crystallized from these systems is nonsolvated. Orig. art. has: 2 figures and 4 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova, Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences SSSR)

SUBMITTED: 12Apr63

DATE ACQ: 31Mar64

ENCL: 02

SUB CODE: CH, PH  
Caro 2/4

NR REF SOV: 004

OTHER: 008

ACCESSION NR: AP4019493

ENCLOSURE: 01

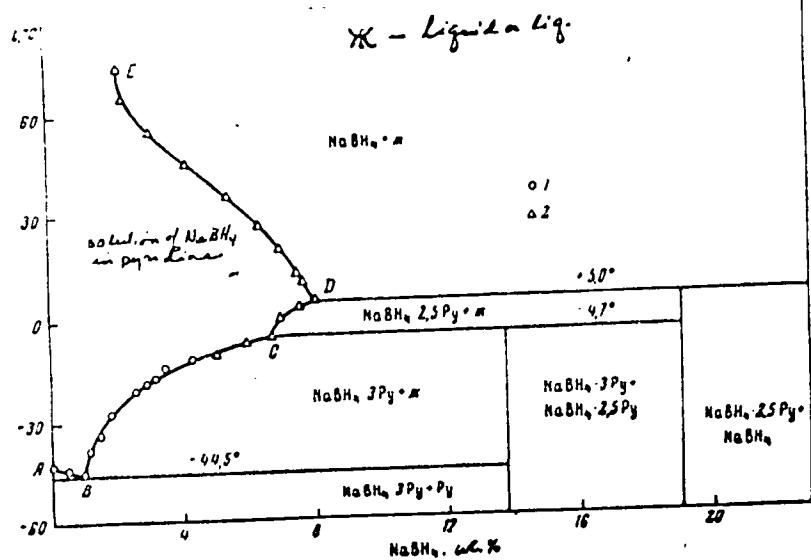


Fig. 1

Solubility polytherm  
of the pyridine-sodium  
borohydride system:

- 1--data by visual-  
polythermic method  
2--data by solubility  
method

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ACCESSION NR: AP4019493

ENCLOSURE: 02

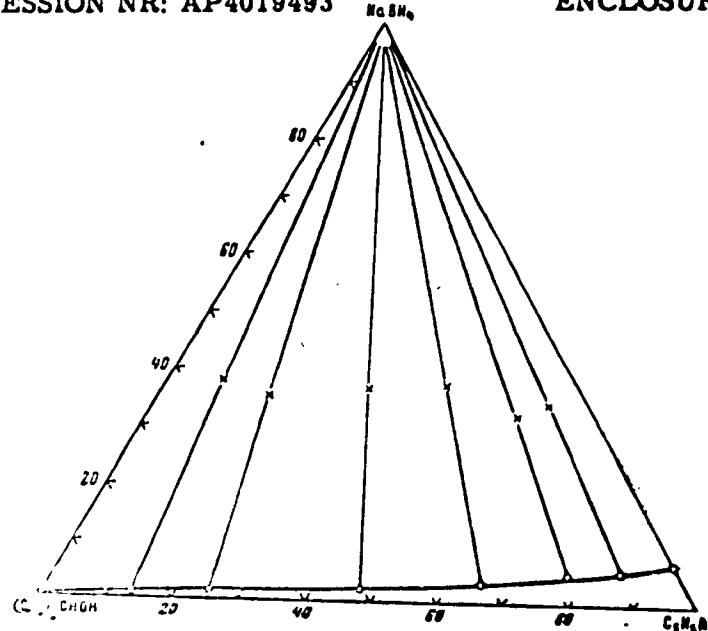


fig. 2

Solubility isotherm of the  
pyridine-isopropanol-so-  
dium borohydride system  
at 18C.

Card 4/4

ACCESSION NR: AP4019494

S/0078/64/009/003/0688/0692

AUTHORS: Mikheyeva, V. I.; Konoplev, V. N.

TITLE: Fusibility diagram in the dimethylformamide-sodium borohydride system

SOURCE: Zhurnal neorg. khimii, v. 9, no. 3, 1964, 688-692

TOPIC TAGS: dimethylformamide sodium borohydride system, sodium borohydride solubility, fusibility diagram, borohydride synthesis, sodium borohydride solvate, liquidus peritectic, sodium borohydride, dimethylformamide solvate

ABSTRACT: Since sodium borohydride is the basic starting material for the synthesis of other borohydrides, its solubility in dimethylformamide (DMF) was studied to determine the possibility of using the latter in the preparation of borohydrides. The fusibility diagram was constructed for the dimethylformamide-sodium borohydride system (fig. 1). The continuous increase in liquidus temperature without a temperature maximum, in addition to breaks in the temperature of the solidus corresponding to increases in sodium borohydride content,

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ACCESSION NR: AP4019494

indicates the peritectic character of the equilibrium in the given system. Three congruently melting solvates are formed: NaBH<sub>4</sub>.4DMF, from 0.66-8.9 mol.% NaBH<sub>4</sub> solutions at 8.7°C, NaBH<sub>4</sub>.2DMF from 15.6 mol.% NaBH<sub>4</sub> solution at 8.7-20.4°C, and NaBH<sub>4</sub>.DMF from 31.3 mol.% NaBH<sub>4</sub> at 20.4-26.5°C. Above 26.5°C the NaBH<sub>4</sub> is crystallized as non-solvated material. The solubility of NaBH<sub>4</sub> in DMF at 0, 25 and 50°C is 5.5, 25.8 and 32.3 mol.% NaBH<sub>4</sub> (2.9, 15.3, and 19.9 wt.% NaBH<sub>4</sub>). "Optical study was conducted by V. A. Vol'nova, for which we thank her." Orig. art. has: 2 figures and 3 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences SSSR)

SUBMITTED: 10Jul63

DATE ACQ: 31Mar64

ENCL: 01

SUB CODE: CH

NR REF Sov: 007

OTHER: 010

2/3

Card

ENCLOSURE 01

ACCESSION NR.: AP4019494

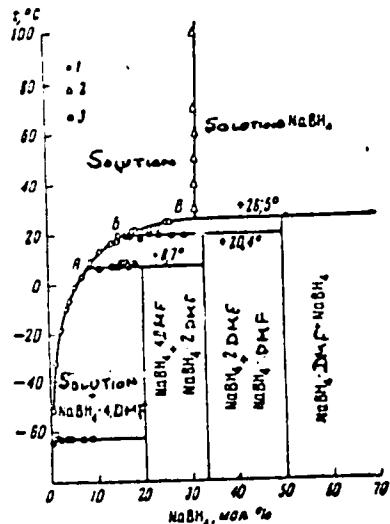


Fig. 1

## Fusibility Diagram

- 1-- data by the visual-polythermal method
- 2-- data by the isothermal method
- 3-- data by the construction of heating curves

Card 3/3

ACCESSION NR: AP4029182

5/0076/84/009/004/0789/0793

AUTHOR: Mikheyeva, V. I.; Titov, L. V.

TITLE: Calcium borohydride

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 4, 1964, 789-793

TOPIC TAGS: calcium borohydride, preparation, purification, exchange reaction, calcium borohydride tetrahydrofuran solvate, nonsolvated calcium borohydride, calcium borohydride pyridine complex

ABSTRACT: The preparation of  $\text{Ca}(\text{BH}_4)_2$  by the exchange reaction  $\text{CaCl}_2 + 2\text{NaBH}_4 = \text{Ca}(\text{BH}_4)_2 + 2\text{NaCl}$  in pyridine was investigated. By extracting the obtained precipitate with tetrahydrofuran (THF) the calcium borohydride was obtained as the solvate  $\text{Ca}(\text{BH}_4)_2 \cdot 2\text{THF}$  in 99.5% purity. Nonsolvated  $\text{Ca}(\text{BH}_4)_2$  may be obtained by heating the solvate to 190°C under vacuum. The purity of the product  $\text{Ca}(\text{BH}_4)_2$  increased with increase in the  $\text{NaBH}_4/\text{CaCl}_2$  reactant ratio: with ratio of 2.5:1 86% purity was attained. 95% purity may be achieved by re-

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ACCESSION NR: AP4029182

crystallizing from THF and reheating.  $\text{Ca}(\text{BH}_4)_2$  is thermally much less stable than the alkali borohydrides; it starts to decompose at 245°C and is almost completely decomposed at 350°C (fig. 1). Since  $\text{Ca}(\text{BH}_4)_2$  is very soluble in  $\text{H}_2\text{O}$  and THF, reactions with the compound may be readily carried out in these solvents.  $\text{Ca}(\text{BH}_4)_2$  is almost insoluble in pyridine (only 0.5 wt. % solubility), forming  $\text{Ca}(\text{BH}_4)_2 \cdot 7\text{Py}$ . The thermogram (fig. 2) of this complex shows a number of endothermic effects the first of which is due to incongruent fusion of  $\text{Ca}(\text{BH}_4)_2 \cdot 7\text{Py}$ . Orig. art. has: 2 figures, 1 table and 4 equations.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR Laboratoriya khimii gidridov i bora (Institute of General and Inorganic Chemistry, Academy of Sciences, Laboratory of Hydrides and Boron)

SUBMITTED: 22Sept63

DATE ACQ: 29Apr64

ENCL: 02

SUB CODE: GH

NO REF SOV: 010

OTHER: 005

Card 3/4

ACCESSION NR: AP4029183

S/0078/64/009/004/0794/0798

AUTHOR: Mikheyeva, V. I.; Titov, L. V.

TITLE: Solubility of calcium borohydride in tetrahydrofuran

SOURCE: Zhurnal neorganicheskii khimii, v. 9, no. 4, 1964, 794-798

TOPIC TAGS: calcium borohydride, solubility, tetrahydrofuran, calcium borohydride tetrahydrofuran solvate, solubility polytherm, solvate property, thermogram, nonsolvated calcium borohydride

ABSTRACT: The solubility of calcium borohydride in tetrahydrofuran (THF) was investigated from -107.5 to 50C. The solubility polytherm consists of a crystallization line for the  $\text{Ca}(\text{BH}_4)_2 \cdot 4\text{THF}$  solvate from -107.5 to 28.6C, and above 28.6C, of the solvate  $\text{Ca}(\text{BH}_4)_2 \cdot 2\text{THF}$  (fig. 1). Microphotographs of the crystals are included; these were taken with the aid of a thermostatic cuvette consisting of two glass cylinders constructed by I. M. Yeremenko (fig. 2). Some of the properties of the two solvates were investigated; their thermo-

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ACCESSION NR: AP4029183

grams were constructed (fig. 3).  $\text{Ca}(\text{BH}_4)_2 \cdot 4\text{THF}$  crystallized in the triclinic system. The five endothermic effects were identified: (1) melting of the compound, (2) elimination of two molecules of solvent, (3) melting of the  $\text{Ca}(\text{BH}_4)_2 \cdot 2\text{THF}$  (4) elimination of the remaining two molecules of solvent (5) thermal decomposition of  $\text{Ca}(\text{BH}_4)_2$ .  $\text{Ca}(\text{BH}_4)_2 \cdot 2\text{THF}$  is stable in dry air, water-soluble without decomposition, and crystallizes in the rhombic system. Orig. art. has: 5 figures and 3 tables

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR Laboratoriya perekisnykh soyedineniy (Institute of General and Inorganic Chemistry, Academy of Sciences SSSR, Laboratory of Peroxide Compounds)

SUBMITTED: 22Sep83

DATE ACQ: 29Apr84

ENCL: 03

SUB CODE: CH

NO REF SOV: 002

OTHER: 001

Card 2/5

ACCESSION NO: AP4029183

ENCLOSURE: 01

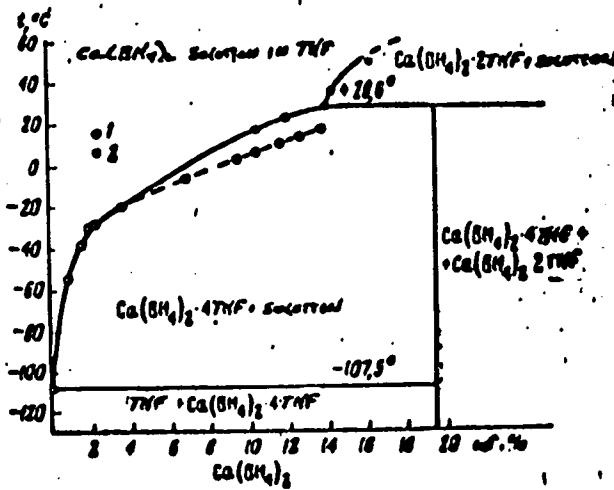


fig. 1

Solubility polytherm of calcium borohydride in tetrahydrofuran. 1--data by the visual-polythermic method; 2--data by the solubility method

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ACCESSION NR: AP4029183

ENCLOSURE, 02

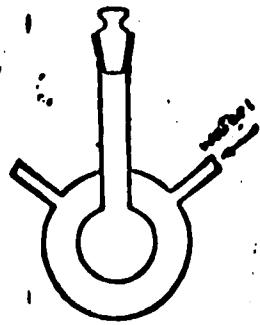


fig. 2

Thermostatic cuvette for photographing crystals

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ACCESSION NR. AP4029103

ENCLOSURE 1

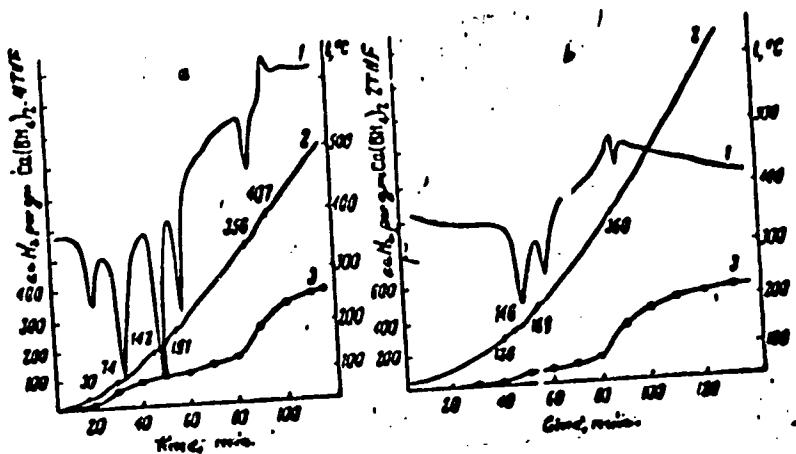


fig. 3  
Thermograms (1, 2)  $\text{Ca}(\text{BH}_4)_2 \cdot 4\text{THF}$  (a) and  $\text{Ca}(\text{BH}_4)_2 \cdot 2\text{THF}$  (b),  
together with hydrogen evolution curve (3)

Card 5/8

KOST, M.Ye.; MAL'TSEVA, N.N.; MIKHEYEVA, V.I.

Concerning the existence of iron hydride. Zhur. neorg. khim.  
9 no.5:1053-1059 My '64. (MIRA 17:9)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.  
Kurnakova AN SSSR.

ACCESSION NR: AP4039270

8/078/64/009/006/1519/1520

AUTHOR: Fedneva, Ye. M.; Alpatova, V. I.; Mikheyeva, V. I.

TITLE: Thermal stability of lithium borohydride

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 6, 1964, 1519-1520

TOPIC TAGS: lithium borohydride, lithium borohydride dioxanate, thermal stability, thermal property, differential thermal analysis, boron compound

ABSTRACT: One of the important characteristics of borohydrides, which has practical significance, is their thermal stability. This question, however, has been little described in literature. This article presents the results of an investigation of lithium borohydride and its dioxanate up to 600 C. The thermal stability of lithium borohydride and its dioxanate was studied by means of a recording pyrometer with differential thermocouple. The rate of heating was 3 C per minute. This investigation of lithium borohydride has shown that there are three endothermic transformations: at 108 - 112 C, 168 - 286 C and 483 - 492 C. The effect at 268 C corresponds to the melting of lithium borohydride. At 380 C a vigorous decomposition occurs, but it has no affect upon the heating curve. The nature of

Card 1/2

Card 2/2

L-57517-65 EWP(s)/EWT(m)/EWP(w)/EWP(l)/EWA(d)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/  
EWA(c) PI-5 IJP(c) MJW/JD/HW

ACCESSION NR: AR5013023

UR/0137/65/000/004/I071/I071  
669.245.018.45

41

SOURCE: Ref. zh. Metallurgiya, Abs. 41446

38

AUTHOR: Kurchman, B. S.; Lashko, N. F.; Mikheyeva, V. V.; Bogdanov, A. M.

B

TITLE: Increasing the high temperature strength of nickel-base cast alloys by combined hardening with intermetallics, carbides and borides

CITED SOURCE: Tr. Tsentr. n.-i. avtomob. i avtomotorn. in-ta, vyp. 71, 1964, 71-102

TOPIC TAGS: thermal stability, metal mechanical property, nickel alloy

TRANSLATION: Introduction of 0.27--.50% C increases the high temperature strength of ANV-300 alloy with a composition (in %) of 15-16.4 Cr, 7.8-9.3 W, 1.5-1.8 Ti, 4.7-4.9 Al and 0.063 B by an average of 30-40%. Introduction of 0.15-0.25 and 0.6-0.7% C reduces the high temperature strength. This property does not improve when the Ti content is increased to 2.8%. The thermal stability of ANV-300 is not reduced by adding carbon. The additional hardening which appears with the introduc-

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~~L 37517-65~~

ACCESSION NR: AR5019023

3

tion of C is explained by the formation of the disperse carbides  $M_{23}C_6$ - $(Nb_{23}C_6)$ , TiC and the carboborides  $M_{23}(B,C)_6$ , such as  $(Cr, W, Ni)_{23}(C,B)_6$ , which retard deformation and fracture of the alloy. Carbide of Ti shows a modifying effect on the structure of ingots. Increasing the content of C to 0.3% in a cast EI43% alloy increases its permanent strength. However, in a deformed alloy, when the carbon content is >0.23%, the permanent strength decreases. Orig. art. has: 10 figures, 11 tables and 12 references. E. Volin

SUB CODE: MM ENCL: 00

~~slap~~

Card 2/2

740. V. Ilya Ivanovich; PIKHET'V, V.I., prof., otd. red.;  
BAGUNOV, E.S., red.

[Feroxides, superoxides and ozonides of alkali and alkaline earth metals] : reakisi, raspredeleni i ozoniy anionichnykh i shchelochnozemel'nykh etalov. Moskva, Nauka, 1968.  
120 p.

L 34499-65 EWP(e)/EMT(m)/EMP(t)/EMP(b) LJP(c) JD  
ACCESSION NR: AP5002795 S/0078/65/010/001/0010/0017

17

16  
15

AUTHOR: Sterlvadkina, Z. K.; Kryukova, O. N.; Mikheyeva, V. I.

TITLE: Reaction of potassium borohydride with sulfur

27 27 27 27

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 1, 1965, 10-17

TOPIC TAGS: potassium borosulfide, synthesis, potassium borohydride sulfur reaction, potassium borohydride

ABSTRACT: A thermodynamic study was made of the irreversible reaction of  $\text{KBH}_4$  with S occurring upon heating mixtures of 0-100% of each to 700C. This and hydrogen evolution curves indicated 2 principal reactions: formation of  $\text{KBS}_2$  at 230-300C;  $\text{KBH}_4 + 2\text{S} \rightarrow \text{KBS}_2 + 2\text{H}_2(1)$ , and thermal decomposition of the borohydride,  $\text{KBH}_4 \rightarrow \text{K} + \text{B} + 2\text{H}_2(2)$ . The most pure  $\text{KBS}_2$  was obtained in highest yield when the S: $\text{KBH}_4$  molar ratio was 2. The deviation from theoretical in the yield of  $\text{H}_2$  when either component was used in excess of this ratio indicated reactions other than (1). The series of thermal effects noted in the tempera-

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I 34499-65

ACCESSION NR: AP5002795

ture range between the beginning of reaction (1) and the beginning of the thermal decomposition of  $\text{KH}_4$  was attributed to phase transformations involving participation of the reaction product  $\text{KBS}_2$  and excess reactants --  $\text{KH}_4$  when S is in the 0--66.7 at.% range, and S when present in amounts above 66.7 at.%. Orig. art. has: 7 figures, 3 equations, and 2 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry Academy of Sciences SSSR)

SUBMITTED: 01Jul83

ENCL: 00

SUB CODE: GC

NR REF SOV: 004

OTHER: 002

Card 2/2

L 43751-65 EPP(c)/EPA(s)-2/EWT(m)/EWP(b)/EWP(e)/EWP(t) // Pr-4/Pt-7 IJP(c)

JD/JG

ACCESSION NR: AP5008478

8/0078/65/010/003/0583/0587

AUTHOR: Sterlyadkina, Z. K.; Kryukova, O. N.; Mikheyeva, V. I.

36  
B

TITLE: Reaction of sodium borohydride with sulfur<sup>11</sup>

<sup>41</sup> <sup>17</sup>

RCI: Zhurnal neorganicheskoy khimii, v. 10, no. 3, 1965, 583-587

TOPIC TAGS: sodium borohydride, potassium borohydride, sulfur, hydrogen sulfide, hydrogen, sodium borosulfide, sodium borosulfide production, gasometric analysis, thermographic analysis, chemical analysis

ABSTRACT: The reaction of sulfur with sodium borohydride has been studied to determine the production conditions for sodium borosulfide and hydrogen. The experiments are carried out with NaBH<sub>4</sub>-S mixtures heated to 750°C and the results are compared with those obtained for reactions of KBH<sub>4</sub>-S mixtures. The thermographic, gasometric, and chemical analyses of the NaBH<sub>4</sub>-S mixtures show two basic reaction trends, viz., formation of sodium borosulfide and hydrogen, and thermal decomposition of nonreactive sodium borohydride proceeding at elevated temperatures in mixtures with higher NaBH<sub>4</sub> content. The formation of sodium borosulfide takes place at a lower temperature (225-230°C) than the formation of potassium borohydride

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L 43751-65

ACCESSION NR: AP5008478

(230-250C) and is accompanied by more side reactions, particularly the formation of hydrogen sulfide. The experimental results are given in Tables 1 and 2 of the Enclosure. The data obtained make it possible to assume that solid solutions of sodium borosulfide with excess hydrogen sulfide are formed from sodium borohydride and sulfur mixtures. Orig. art. has: 3 formulas, 4 figures, and 2 tables.

ASSOCIATION: none

SUBMITTED: 22Sep63

ENCL: 02

SUB CODE: GC

NO REF SOV: 006

OTHER: 001

Card 2/4

L 10441-66 EWT(m)/EWP(1)/T/EWA(h) JW/RM

ACC NR: AP6000287 SOURCE CODE: UR/0078/65/010/009/2108/2114

AUTHOR: Mikheyeva, V. I.; Konoplev, V. N.

ORG: None

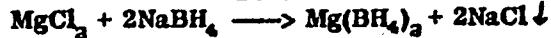
TITLE: Reaction of sodium borohydride with anhydrous magnesium chloride in N, N-dimethylformamide

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 9, 1965, 2108-2114

TOPIC TAGS: magnesium compound, sodium compound, borohydride, exchange reaction, chloride, solvent extraction

ABSTRACT: The exchange reaction between sodium borohydride and anhydrous magnesium chloride in N, N-dimethylformamide at 25 and 50C occurs readily, forming magnesium borohydride in 87-90% yield:

DMF



When the solution of magnesium borohydride in dimethylformamide is kept for 48 hours at a temperature between -5 and 7C, or when the solvents ether, benzene, or diethylene glycol dimethyl ether are added, a crystal solvate of the composition  $\text{Mg}(\text{BH}_4)_2 \cdot 6\text{HCON}(\text{CH}_3)_2$  separates out. The great stability of the bond between dimethylformamide and the magnesium borohydride molecule, the low thermal stability of the latter, and the low volatility of dimethylformamide permit desolvation neither by treatment with solvents nor by vacuum distillation.

Card 1/2

UDC: 546.33'273'11+546.46'273'11

L 10441-66

ACC NR: AP6000287

Thus, the preparation of unsolvated magnesium borohydride remains a problem to be solved. Orig. art. has: 1 figure, 2 tables, and 2 formulas.

SUB CODE: 07 / SUBM DATE: 17Sep64 / ORIG REF: 005 / OTH REF: 024

PC

Card

2/2

L 114215-66 EWT(m)/EWF(j)/EWA(h)/EWP(e)/EWF(b) IWP(c) JD/NW/JW/RM

ACC NR: AP6003641

SOURCE CODE: UR/0076/65/010/010/2363/2366

AUTHOR: Konoplev, V. N.; Mikhayeva, V. I.

38

ORG: none

B

TITLE: Solubility isotherm of magnesium boryhydride and sodium boro-hydride in N and N-dimethylformamide at 0°C

41 21 //2

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 10, 1965, 2363-2366

TOPIC TAGS: magnesium compound, sodium compound, borohydride, solubility

ABSTRACT: In order to check the hypothesis that solvent molecules are occluded by  $Mg(BH_4)_2 \cdot 6DMF$  crystals (DMF=dimethyl formamide  $HCON(CH_3)_2$ ), the chemical nature of the phases crystallizing at 0°C in the ternary system  $(Mg(BH_4)_2 \cdot NaBH_4 \cdot DMF)$  was investigated. Equilibrium was studied by the isothermal method of solubility determination. The solubility isotherm is shown in fig. 1. It shows fields of crystallization of only three solid phases,  $Mg(BH_4)_2 \cdot 6DMF$ ,  $NaBH_4 \cdot 4DMF$ , and  $NaBH_4 \cdot 2DMF$ . The cocrystallization of  $NaBH_4 \cdot 2DMF$  and  $Mg(BH_4)_2 \cdot 6DMF$  has an isosmotic point at 2.32%  $NaBH_4$  and 3.11%  $Mg(BH_4)_2$ . The field of crystallization

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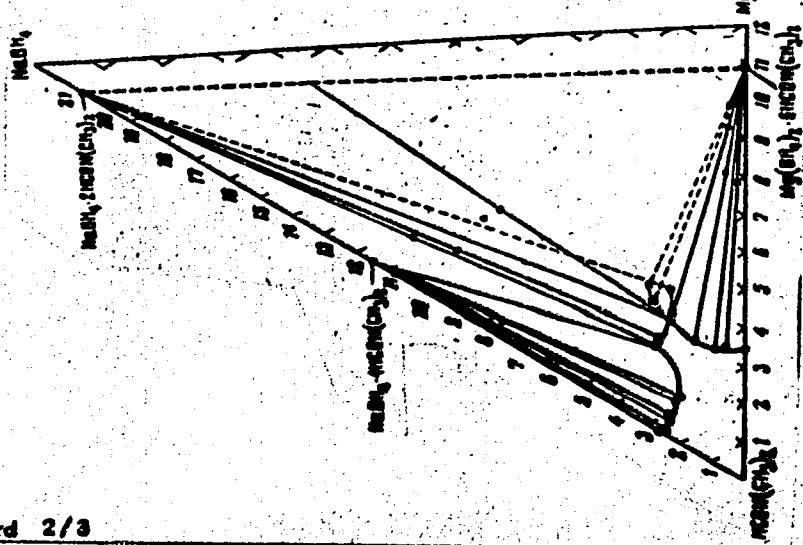
Card 1/3

L 14215-66

ACC NR: AP6003641

of  $\text{NaBH}_4 \cdot 2\text{DMF}$  extends to the region (which is metastable for it) of magnesium borohydride hexasolvate. A similar phenomenon is observed

Fig. 1. Solubility isotherm of the system  $\text{Mg}(\text{BH}_4)_2$ - $\text{NaBH}_4$ - $\text{HCOM}(\text{CH}_3)_2$  at 0°C.



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L 14215-66

ACC NR: AP6003641

in the crystallization of  $Mg(BH_4)_2 \cdot 6DMF$ . This phenomenon is probably due to a higher viscosity of the solution, a marked supercooling tendency, lack of a seed for facilitating the crystallization, and the existence in the solution of unstable complexes based on magnesium and sodium borohydrides. Experimental data show that the addition of  $Mg(BH_4)_2 \cdot 6DMF$  crystals to the dimethylformamide solution of sodium borohydride has a desolvating effect on the  $NaBH_4 \cdot 4DMF$  compound, which changes into  $NaBH_4 \cdot 2DMF$  as the content of added  $Mg(BH_4)_2$  increases.  
Orig. art. has: 1 figure, 1 table.

SUB CODE: 07/ SUBM DATE: 27Jan65/ ORIG REF: 007/ OTH REF: 002 .

TS

Card 3/3

MIKHAYFVA, V.I.; KUZNETSOV, V.A.

Interaction of sodium oxide hydrate with its metaborate.  
Zhur. neorg. khim. 10 no.12:2585-2590 D 1965.  
(MIA 1981)

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134120012-6

MAL'TSEVA, N.N.; D. V. KARABYANOV, et al.

Reactions between the elements of the group  
nickel and iron. Part 1. Nickel and iron

I. Inability of the elements to form  
an S.R.F. (solid solution)

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134120012-6"

MIKHAYEVA, V.I.

Chemical individual and chemical compound; fiftieth-  
anniversary of the publication of N.S.Kurnakov's work  
"Compound and chemical individual". Zhur.neorg.khim. 11  
no.1:3-12 Ja '66. (MIA 10:1)

1. Submitted June 30, 1964.

L 42877-66 EWP(e)/ENI(m)/EWP(t)/ETI IJP(c) JD/W SOURCE CODE: UR/0073/66/011/004/0720/0725  
ACC NR: AP6022890

AUTHOR: Mal'tseva, N. N.; Strel'yadkina, E. K.; Mikheyeva, V. I.

ORG: Laboratory of Peroxy Compounds, Institute of General and Inorganic Chemistry im. A. S. Kurnakov, Academy of Sciences, SSSR (Laboratoriya perekisnykh soyedinenii, Institut obshchey i neorganicheskoy khimii Akademii nauk SSSR)

TITLE: Reaction of sodium borohydride with nickel chloride in aqueous solutions

SOURCE: Zhurnal neorganicheskoy khimii, v. 11, no.4, 1966, 720-725

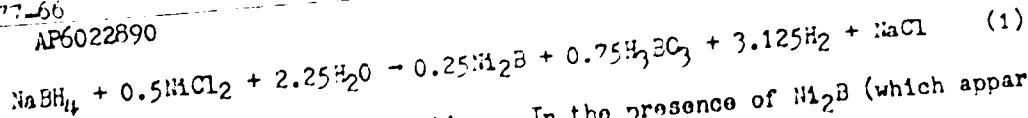
TOPIC TAGS: nickel compound, borohydride, sodium compound, chemical precipitation, hydrolysis

ABSTRACT: In studying the reaction of  $\text{NaBH}_4$  with nickel salts, use was made of a method in which the ratio of the initial reactants was varied, and the solid, liquid, and gaseous phases formed were fully analyzed chemically. A study of the dependence of the hydrogen evolved on the ratio of the initial components showed that there is no quantitative liberation of hydrogen. When small amounts of nickel chloride are added, the amount of hydrogen evolved approaches the theoretical amount, then decreases with increasing  $\text{NiCl}_2$  content, and reaches a constant value (75% of theoretical yield) when  $\text{NiCl}_2:\text{NaBH}_4 = 0.5$ . The amount of precipitate formed remains constant up to this value, then smoothly decreases as this ratio increases. The amount of precipitate formed in accordance with the overall equation

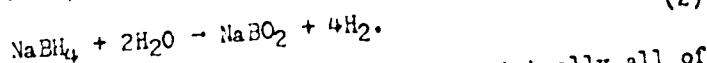
UDC: 546.273'33'11

Card 1/2

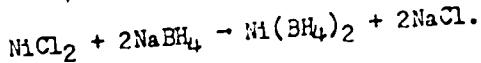
L 42877-66  
ACC NR: AP6022890



is proportional to the  $\text{NiCl}_2$  concentration. In the presence of  $\text{Ni}_2\text{B}$  (which apparently acts as a catalyst) the excess  $\text{NaBH}_4$  reacts as follows:



For this reason, in the presence of very small amounts of  $\text{NiCl}_2$ , virtually all of  $\text{NaBH}_4$  undergoes hydrolysis, and the amount of hydrogen evolved is close to 100%. It is postulated that the first step of the overall process expressed by equation (1), with the ratio  $\text{NiCl}_2:\text{NaBH}_4 = 0.5$ , is expressed by the equation



Analysis of the precipitates and filtrates shows that only about 1/4 of the boron from  $\text{NaBH}_4$  is bound in the precipitate of the composition  $\text{Ni}_2\text{B}$ , while the remaining 3/4 goes into solution. Orig. art. has: 4 figures, 3 tables, and 3 formulas.

SUB CODE: 07/ SUBM DATE: 08Aug64/ ORIG REF: 011/ OTH REF: 005

*Card 212 b6b*

MIKHEYEV, V. N.; FEDNEVA, Ye.M.

Complex compounds of boron hydrides with nitrogen-containing organic bases. Part 1. Compounds of diborane with pyridine and quinoline. Zhur.neorg.khim. 1 no.5:894-902 My '56.

(MLRA 9:10)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova  
Akademii nauk SSSR, Moscow.  
(Boron hydrides) (Pyridine) (Quinoline)

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134120012-6

MURAVIEVA, V. S.,

"The Typology of Soil Organization in the Kolkhozes of the Trans-Oka Region,  
Moscow Oblast." *Materialy na 4-ye konferentsii molodykh nauchnykh sotsial'*

paper presented at the 4th conference of Young Scientists of the Institute  
of Geography of the USSR Academy of Sciences, 1958 (Izv. AN SSSR, ser. geogr.,  
1958, No. 2, p 151-53, GORBUNOVA, M. N.)

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134120012-6"

MIKHEYEVA, V.S.

Agricultural microregions of trans-Oka Moscow Province. Vop.geof.  
no.49:27-42 '60.  
(Moscow Province--Agriculture) (MIRA 13:8)

MIKHEYEVA, V. S.

Economic-mathematical model of the distribution of agricultural production in the regions of the country. Vest. Mosk. un. Ser. 5: Geog. 17 no. 5:12-17 S-0 '62. (MIRA 15:10)

1. Vychislitel'nyy tsentr pri Gosudarstvennom ekonomicheskom sovete SSSR i kafedra ekonomicheskoy geografii SSSR Moskovskogo gosudarstvennogo universiteta.

(Agricultural policy)  
(Economics, Mathematical)

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134120012-6

MIKHEIEVA, V. I.

"Intonation of sentences with separated parts in French."

report submitted for 5th Intl Cong of Phonetic Sciences, Muenster, W. Germany,  
16-23 Aug 64.

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134120012-6"

L 64385-63 EHT(a)/EWA(d)/SHP(t)/EWP(z)/EWP(b) - MJW/JD/MJW(CL)

ACCESSION NR: AIC5016958

UR/0276/65/000/007/G007/G007

669.24:620.17:620.183

38

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Svodnyy tom, Abs. 7G52

B

AUTHOR: Kuznetsov, V. S.; Jasinskij, N. F.; Mikheyeva, V. V.; Bogdanov, A. M.

TITLE: Improvement of high-temperature strength of nickel-based cast alloys by composite hardening with carbides, intermetallic compounds

CITED SOURCE: Zh. Tekhnologiya mashinostroyeniya, vyp. 71, 1964, 71-102

TOPIC: Nickel alloy, high-temperature strength, alloy hardening, carbon substitution effect, composite bonding

TRANSLATION: The authors discuss the mechanism of working cast IR alloys and the effects of various alloying elements on mechanical properties and structure. Influence of 0.02 to 1.7% carbon on properties of the IR alloys was investigated in accordance with alloy AMV-200 (composition in % by weight: 18 - 18 Cr, 7.5 - 9.3 W, 1.5 - 1.8 Ti, 4.7 - 4.9 Al, 0.083 B). Tensile tests, 11 tables and 10 illustrations. E. Volin

SUB CODE: MM, MI

ENCL: 66

Card: 1/1

YEFIMOCHKINA, Yevgeniya Petrovna; KOZHEVNIKOV, Naum Iosifovich;  
GONOROVSKIY, I.S., rezensent; MIKHEYEVA, Ye.A.,  
rezensent; GAVRILOVA, T.M., red.

[Problems in the theory of probability] Zadaniya po teorii  
veroyatnostei. Moskva, Mosk. aviatcionnyi inst. im. Ser.  
Ordzhonikidze, 1963. 96 p. (MIIKA. 1963)

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134120012-6

171, 172, 173  
X-  
G-  
revised  
negative

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134120012-6"

MIKHEYEVA, Ye.G.

Effect of local and generalized X rays on the anterior portion of  
the eye. Med.rad. 5 no.7:85-87 '60. (MIR 13:12)  
(EYE) (X RAYS—PHYSIOLOGICAL EFFECT)

L 11046-63

BDS

58  
57

ACCESSION NR: A13002976

S/2927/62/000/000/0037/0040

AUTHOR: Avak'yants, G. M.; Grinberg, I. S.; Zaugol'nikova, Ye. G.; Mironenko, Z. P.; Mikheyeva, Ye. P.; Murygin, V. I.

TITLE: Inductance of germanium and silicon diodes [Report at the All-Union Conference on Semiconductor Devices, Tashkent, 2-7 October, 1961]

SOURCE: Elektronno-dy\*rochny\*ye perekhody\* v poluprovodnikakh. Tashkent, Izd-vo AN UzSSR, 1962, 37-40

TOPIC TAGS: D2-Ye germanium diode, D2-B germanium diode, P-401 germanium transistor, P-403 germanium transistor, germanium diode inductance, silicon photocell inductance

ABSTRACT: Results of an experimental investigation of point-contact germanium (D2-Ye and D2-B) diodes,<sup>1</sup> junction-type germanium P-401 transistors,<sup>2</sup> and laboratory-model silicon photocells are reported. The experimental hookup and methods were similar to those used for investigating selenium rectifiers (ibid., pp 17-29). It was found that the point-contact germanium diodes, with a negative bias in the region of drooping current-voltage characteristics, possess an inductance up to a few henrys; this inductance falls to zero when the supply frequency is increased to 10-15 kc. Inductance also was observed in the emitter-collector of P-403 and

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L 11046-63  
ACCESSION NR: AT3002976

P-401 germanium transistors, with the base free. Silicon photocells, not illuminated, biased deep into the reverse-current region, with a 1-kc signal of 15-20 mv, exhibited inductance of a few henrys; however, the inductance was unstable in time. The effect is attributed to technological peculiarities in manufacturing the photocells. Curves representing the effect of the bias current, frequency, admittance, and bias voltage on the inductance of the above devices are given. Orig. art. has: 7 figures.

ASSOCIATION: Akad. nauk SSSR(Academy of Sciences SSSR); Akad. nauk UzSSR(Academy of Sciences UzSSR); Tashkentskiy gosuniversitet im. V. I. Lenina (Tashkent State University)

SUBMITTED: 00

DATE ACQ: 15 May 63

ENCL: 00

SUB CODE: 00

NO REF SQV: 001

OTHER: 001

Kesler  
Card 2/2

L 3145-66 EWT(m)/T/EWP(t)/EWP(b) IJP(c) JD

AM5019639

BCC EXPLOITATION

UR/ 39

32

31

Belousov, Nikolay Nikolayevich (Candidate of Technical Sciences);  
Mikheyeva, Yekaterina Nikolayevna (Engineer); Sereanova, Mariya  
NIKOLAYEVNA (Enginner)

Heat treatment of new cast aluminum alloys (Termicheskaya obrabotka novykh liteynykh aluminievych splavov) Leningrad, [LDNTP] 1964. 34 p. illus., biblio., tables. (At head of title: Leningradskoye oblastnoye otdeleniye obshchestva "Znaniye" RSFSR) Belousov, Nikolay Errata slip inserted. 4200 copies printed. Series note: Leningradskiy dom nauchno-tehnicheskoy propagandy. Peredovoy proizvodstvenno-tehnicheskiy opyt. Seriya: Metallovedeniye i termicheskaya obrabotka

TOPIC TAGS: aluminum alloy, new aluminum alloy, cast aluminum alloy, alloy heat treatment, alloy property, electric heat treatment unit

PURPOSE AND COVERAGE: This booklet is intended for metallurgists and engineering personnel dealing with the heat treatment of aluminum-base alloys. New cast aluminum alloys which are hardened by heat treatment and are included in GOST-2685-63 are described. The

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L 3145-66

AM5019639

7

systems, phase diagrams, and chemical composition of these new heat-resistant and corrosion-resistant aluminum alloys are indicated, and methods of casting them are described. Optimal conditions of heat treatment applied to strengthen these alloys are dealt with in detail. Mechanical properties of new aluminum alloys strengthened by heat treatment are indicated, and electrical units used for alloy heat treatment are briefly described.

## TABLE OF CONTENTS:

Introduction -- 3

1. Brief Outline of New Aluminum Alloys Hardenable by Heat Treatment, Specified in GOST 2685-63 -- 4
2. Heat Treatment of Cast Alloys of the Al-Mg System -- 9
3. Heat Treatment of New, Al-Cu Base, Complex Alloys -- 21
4. Heat Treatment of New Alloy of the Al-Zn-Mg System -- 27

Card 2/3

L 31/5-66

AM5019639

5. Standardized Heat Treatment Conditions of New Cast Aluminum Alloys -- 29

6. Air-Blast Units for Heat Treatment of Aluminum Alloys -- 29

References -- 35

SUB CODE: MM, IE

SUBMITTED: 0064 NO REF Sov: 011

OTHER: 000

Card 373

BELOUSOV, Nikolay Nikolayevich, kand. tekhn.nauk; MIRKHEeva,  
Yekaterina Nikolayevna, inzh.; SARAFAN'YA, Yekaterina  
Nikolayevna, inzh., KUROYeva, Ye.A., red.

[New aluminum foundry alloys] Novye liteinye aluminnevye  
splavy. Leningrad, 1972. 35 p.

NIKIFOROVA, Ye. M.; MIKHEYEVA, Ye. V.

Effect of brain preparations on the development of microflora.  
Vopr. neirokhir. 15 no. 4:32-35 July-Aug. 1951. (CIML 21:3)

1. Of the Clinic Diagnostic Laboratory (Head — Prof. L. G. Smirnova), Institute of Neurosurgery imeni Academician N. N. Burdenko (Director -- Prof. B. G. Yegorov, Corresponding Member of the Academy of Medical Sciences USSR).

USSR/Medicine - Phosphatase      Sep/Oct 51

"Phosphatase in Brain Tumors of Children," Ye. V. Mikhayeva, Clinical Lab, Inst of Neuro-Tumor imeni, N.N.Burdenko, Acad Med Sci USSR

"Vop. Neirokhirg." No 5, pp 17-21

Active acidic phosphatase is found in medulloblastomas, in astrocytomas, and in brain tissue. Activity of phosphatase is greater in malignant tumors (medulloblastomas) than in so-called benign tumors (astrocytomas.) Definite parallelism between the rapidity of development of

USSR/Medicine - Phosphatase  
(Contd)  
Sep/Oct 51

clinical symptoms, the activity of phosphatase and the morphology of the tumor was established. Biochemical analysis of the tumors and biopsy served to diagnose their malignancy. Submitted 2 Jun 51.

198760

MIKHEYEVA, YE. V.

NIKHEYeva, Ye. V.

NIKHEYeva, Ye. V. -- "Biochemical Investigations of Neuroectodermal  
Brain Tumors." Acad Med Sci USSR. Moscow, 1955. (Dissertation  
for the Degree of Candidate in Medical Sciences).

So.: Knizhnaya Letopis', No. 2, 1956.

GOSHEVA, A.Ye., kand.med.nauk; MIKHEYEVA, Ye.V., kand.med.nauk

Study of acid phosphatase in some neuroectodermal tumors in man.  
Probl.sovr.neirokhir. 3:389-396 '59. (MIRA 16:5)  
(BRAIN-TUMORS) (PHOSPHATASES)

UGRYUMOV, V. M., prof.; KONOVALOV, Yu. V., prof.; SPIRIN, B. G., kand.  
med. nauk; IVANOV-DYATLOV, F. G., kand. med. nauk.; MESHCHERYAKOVA,  
A. V.; MIKHEYEVA, Ye. V., kand. med. nauk; PEDOROV, S. N.;  
SHVORNEVA, V. Z.; D'YAKONOV, V. Ye. (Moskva)

Disorders of respiration and their treatment in tumors of the brain.  
Vop. neirokhir. no.6:46-50 '61. (MIRA 14:12)

(BRAIN--TUMORS) (RESPIRATION)

MIKHEIEVA, Ye.V. (Moskva)

Examination of cerebrospinal fluid in schizophrenic patients.  
Zhur. nevr. i. psikh. 6; no.6:920-930 '63. (MIA 17:5)

LEATHER, U.S., LIBRARY, U.S. M.

Leather

Method of determining the hardness of leather.  
Leg. prom., No. 3, 1952.

Monthly List of Russian Accessions, Library of  
Congress, June 1952. Unclassified

1. SINAYUK, D. A.; ZAKATOVA, N. D.; NIKHEYEVA, Ye. Ya.
2. USSR (600)
4. Shoe Industry
7. Role of middlesole in shoes, Leg. prom., 12, No. 11, 1952.
  
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Uncl .sified.

MIKHIEVA, Ye.Ya.

ZAKATOVA, N.D., kandidat tekhnicheskikh nauk; MIKHIEVA, Ye.Ya.,  
kandidat tekhnicheskikh nauk.

Leather homogeneity for shoe tops. Leg.prom.14 no.12:31-34  
(MLRA 8:2)  
D '54.  
(Leather--Testing) (Shoe industry)

ZAKATOWA, N.D., kandidat tekhnicheskikh nauk; MIKHEYEVA, Ye.Ya., kandidat  
tekhnicheskikh nauk.

Effect of leather stiffness on the strength of screw fastening.  
Leg. prom. 15 no.6:16-17 Je '55. (MIRA 8:8)  
(Shoe industry)

MIKHEYEVA, Ye. Ya.

USSR/Chemical Technology - Chemical Products and Their  
Application. Leather. Fur. Gelatin. Tanning Agents.  
Technical Proteins

I-29

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 14064  
Author : Mikheyeva Ye.Ya., Zakanova N.D.  
Inst : Central Scientific Research Institute of Leather and  
Shoe Industry  
Title : Resistance of Russian Leather to Cyclic Mechanical Action  
Orig Pub : Nauch.-issled. tr. Tsentr. n.-i. in-ta kozh-obuv.  
prom-sti, 1955, 25, 114-123

Abstract : Investigation of the resistance of Russian leather,  
chrome-vegetable, chrome-sulfite cellulose-chrome,  
chrome-sulfite cellulose-syntan and vegetable extract  
tanned, to repeated stretching and flexure. The nature  
of changes shown by the samples indicates that on a cy-  
clic action there take place two processes: orientation  
of structural elements in the direction of tensile

Card 1/2

- 416 -

NIXHEYEVA, Ye.Ya.; ZAKATOVA, N.

Defining water permeability indices in materials used for shoe uppers.  
Lek. prom. 17 no.6:21-25 Je '57. (U.S.S.R. Publ. No. 10.8)  
(Permeability) (Shoe industry)

МИХАИЛОВА А.Н.  
ЗАКАТОВА, Н.Д.; МИХАЙЛОВ, А.Н.; МИХЕЕВА, Е.Е.

Determining the resistance of leather subjected to hygrothermal action.  
Leg. prom. 18 no.4:30-31 Ap '58.  
(Leather--Testing)

(MIRA 11:4)

MIKHEYEVA, Ye.Ya., kand.tekhn.nauk

Developing systems of laboratory control and standards for the  
shoe industry. Nauch.-issl. trudy TSNIKP no.30:160-170 '59.

(MIRA 14:5)

(Shoe industry—Quality control) (Shoe manufacture—Standards)

GUROV, V.; MIKHEYEVA, Z.

Potentials of Krasnoyarsk construction projects. Fin. SSSR  
23 no.3:67-70 Mr '62. (MIRA 15:3)

1. Upravlyayushchiy Krasnoyarskoy krayevoy kontoroy Stroybanka  
(for Gurov). 2. Nachal'nik planovo-ekonomicheskogo otdela  
Krasnoyarskoy krayevoy kontoroy Stroybanka (for Mikheyeva).  
(Krasnoyarsk Territory--Construction industry--Finance)  
(Krasnoyarsk Territory--Banks and banking)

15-57-2-1310

Translation from: Referativnyy zhurnal, Geologiya, 1967, Nr 2,  
p 18 (USSR)

AUTHORS: Kasimova, G. K., Kuznetsova, Z. V., Mikheyeva, Z. F.

TITLE: Microfauna of the Jurassic Deposits in the Ulluchay  
(Central Dagestan) Section Mikrofauna yurskikh  
otlozheniy razreza Ulluchay (tsentral'nyy Dagestan)--  
in Azerbaydzhane

PERIODICAL: Dokl. AN AzSSR, 1956, Vol 12, Nr 1, pp 9-14

ABSTRACT: In the section at the Ulluchay River, the upper Aalenian  
is composed of a succession of argillaceous shales  
containing sandstones and aleurites with streaks of  
limestones. The macrofauna consists of pelecypods and  
ammonites. The foraminifera are characterized by a  
great variety of species: Cristellaria, Nodosaria,  
Marginulina, Dentalina, Spirophthalmidium and others;  
the ostracoda are rare and are represented by new  
species. The Bajocian is made up of a succession of  
lime-free clays with sandstones. The foraminifera

Card 1/2

KAPUSTINA, A.L.; KONSTANTINOVA, I.M.; MIKHEYEVA, Z.I.

Trilonometric determination of aluminum in fused silicon and aluminum  
during the electrometallurgy of aluminum. Trudy Vses.-Sib. fil. AN SSSR  
(MIRA 16:3)  
no.43:90-92 '62.  
(Aluminum--Electrometallurgy) (Aluminum--Analysis)

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also , University of Michigan, Ann Arbor, red; and, U.S. Lines, Inc., red; and, [REDACTED], ALL INFORMATION CONTAINED

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DATE [REDACTED] BY [REDACTED]

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134120012-6"

MIKHEYKIN, A., kapitan 3 ranga; LANSKIY, V., kapitan 2 ranga

Small portable radio direction finder. Mor.flot 19 no.12:34  
D '59. (MIRA 13:3)  
(Radio direction finders)

ALEKSANDROV, I.V.; KARANSKY, V.B.; MIKHEYKIN, I.D.

Electron paramagnetic resonance studies of the structure of active  
centers of chromium oxide catalysts for ethylene polymerization.  
Kin. i kat. 6 no.3x439-47 My-Je '65.

(MTR 18:10)

U. Institut khimicheskoy fiziki AN SSSR.

MIKHEYKIN, P.

New grain. Rab. 1 sial. 39 no. 912 S '63. (MIRA 16:11)

1. Kolkhoz "Peramoga" Glubokskogo proizvodstvennogo  
upravleniya.

MIKHEYKIN, V.Ya. (Olonets, Karelo-Finskoy SSR, ul. Karla Libknekhta, d.35)

Foreign body in the abdominal cavity simulating appendicitis. Vest.  
khir. 77 no.4:110-111 Ap '56. (MLRA 9:8)

1. Iz Olonetskoy rayonnoy bol'nisny Karelo-Finskoy SSSR.  
(ABDOMEN--FOREIGN BODIES)

MIKHEYKIN, V.Ya.

Mediastinal sarcoma in a 4-year-old child. Pediatriia, Moskva, 36 no.8:  
79-81 Ag '58. (MIRA 12:1)

1. Is Olonetskoy rayonnoy bol'nisay (glavnnyy vrach V.Ya. Mikheykin).  
(**MEDEASTINUM**, neoplasms,  
sarcoma in child (Rus))  
(**SARCOMA**, in inf. & child.  
mediastinum (Rus))

MIKHEYKIN, V.Ya.

Records on accidents. Zdrav.Ros.Feder. 4 no.11:15-17 '60. (MIRA 13:11)

1. Iz kafedry organizatsii zdravookhraneniya (zav. - prof. S.Ya. Freydlin) I Leningradskogo meditsinskogo instituta imeni akademika I.P.Pavlova (dir. - dotsent A.I.Ivanov).

(LENINGRAD--ACCIDENTS)

(MEDICAL RECORDS)

MIKHEYKIN, V. Ya.

"Studying morbidity among collective farmers accompanied by temporary disability" by M.M.Chumak, Reviewed by V.IA.Mikheikii,  
Sov.zdrav. 19 no.12:83-84 '60, (MIRA 14:3)  
(PUBLIC HEALTH, RURAL)  
(AGRICULTURAL LABORERS—DISEASES AND HYGIENE)  
(CHUMAK, M.M.)

MIKHEYKIN, V. Ya.

Current problems in organizing infirmary traumatological aid in cities. Ortop., travm. i protez. no.11:58-62 '61.  
(MIRA 14:12)

1. Iz kafedry organizatsii zdravookhraneniya (zav. - prof. S. Ya. Freydlin) 1-go Leningradskogo meditsinskogo instituta im. akad. I. P. Pavlova (dir. - dots. A. I. Ivanov)

(FIRST AID IN ILLNESS AND INJURY) (ACCIDENTS)

MIKHEYKIN, V.Ya.

In scientific societies. Sov.zdrav. 21 no.7:92-93 '62.

(MIRA 15:8)

(PUBLIC HEALTH SOCIETIES)

MIKHEYKIN, V.Ya.

Hospital care of patients with contusion and concussion of the  
brain. Sov.med. 26 no.6:141-142 Je '62. (MIRA 15:11)

1. Iz kafedry organizatsii zdravookhraneniya (zav. - prof. S.Ya.  
Freydlin) I Leningradskogo meditsinskogo instituta imeni I.P.  
Pavlova (dir. - dotsent A.I.Ivanov).  
(BRAIN—CONCUSSION)

ZELEVSKIY, R.O.; MIKHEYKIN, V.Ya.

Some problems in the analysis of morbidity requiring ambulatory  
urological aid. Urologia 27 no.4:41-44 Jl-Ag '62.

(MIRA 15:11)

1. Iz polikliniki No.31 I Leningradskogo meditsinskogo instituta  
imeni I.P. Pavlova (nauchnyy rukovoditel' - prof. A.M. Gasparyan).  
(UROLOGY)

MIKHEYKIN, V.Ya. (Leningrad)

Review of I.A. Gorokhov's book "Planning and expense analysis for the maintenance of a hospital and poly-clinic". Kaz.med. zhur. no.2:87-88 Mr-Ap'63  
(MIRA 16:11)

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BARKMAN, E.M., prof.; MIKHEYKIN, V.Ya., kand.med.nauk

"New forms of organization and methods of the work of municipal polyclinics" by V.A. Demidov, B.D.Petrakov, B.M.Khramov. Reviewed by E.M.Barkman, V.IA.Mikheikin. Zdrav. Ros. Feder. 8 no.2:34-36 (MIRA 17:3)  
F\*63

MIKHLEYKIN, V.Ye. (Leningrad)

Organization of hospitalization for persons suffering from  
injuries inflicted while under the influence of alcohol.  
Sov. zdrav. 22 no.6:34-36'63. (MIRA 16:9)

1. Iz kafedry organizatsii zdravookhraneniya (zav. - prof. S.Ya.  
Freydlin )I Leningradskogo meditsinskogo instituta imeni akade-  
mika I.P.Pavlova.

(ALCOHOLICS—HOSPITALS AND ASYLUMS)  
(TRAUMATISM)

MIKHEYKIN, V.Ya.

Review of O.D. Kolybin's book "Fundamentals of the therapeutic-  
protective regimen". Sov. zdrav. 21 no.9:88-89 '62  
(MIRA 17:4)

MANZHULO, G.P.; MIKHEYKIN, V.Ya.

Invalidism in patients hospitalized because of injuries.  
Zdrav. Ros. Feder. 8 no.3&10-12 Mr'64 (MIRA 17:4)

1. Organizatsionno-metodicheskiy otdel Leningradskogo instituta  
travmatologii i ortopedii i kafedra organizatsii zdravookhra-  
neniya I Leningradskogo meditsinskogo instituta imeni akademika  
I.P.Pavlova ( zav. - prof. S. Ya. Freydlin).

RACHKOV, A.A.; MIKHEYKIN, V.Ya., red.

[Grigorii Vital'yevich Khlopin; his life and work] Grigoriy  
Vital'yevich Khlopin; zhizn' i deiatel'nost'. Leningrad,  
Meditina, 1965. 111 p. (MIRA 18:10)

Mikhaylichenko, P.M.

IVANOVA, N.G.; GOLDENBERG, I.Ya.; LUKASHEV, I.I.; KARUT, T.A.; KANDYBA, S.O.;  
MIKHAYLICHENKO, P.M.; MAHMANSON, G.L.

Studies on biological properties of *Mycobacterium tuberculosis muris*.  
Probl. tuberk., Moskva no. 3:22-28 May-June 1952. (CIML, 22:4)

1. Of the Ukrainian Tuberculosis Institute (Director -- Prof. B. M.  
Khmel'nitskiy), Khar'kov.

MIKHILETS, N. S.

CX1169<sup>a</sup>. The influence of Technology of Smelting and Casting of Rimmed Steel on the Amount of Lamination Defects. Vistanie tekhnologii vypivki i razlivki tipizirbofet stali na brak po raslejotu. (Russian.) P. S. Plekhanov, N. S. Mikhilets, A. E. Gorelkina, and N. G. Nikulin. *Stal*, v. 16, no. 5, May 1956, p. 422-430.

The influence of various technological factors on the development of friability in the upper parts of ingots with subsequent lamination is discussed on the basis of several experimental and a large number of industrial smeltings. Suggests optimum conditions of smelting and cutting. Tables, graphs, diagram.